AMENDMENTS TO THE SPECIFICATION

Paragraph [0012]:

A non-limiting example of an expanding thermal plasma apparatus 100 is shown in Figure 1. A coating 132 is deposited on the surface 134 of a substrate 130 as the substrate 130 is scanned in front of an array 110 expanding thermal plasma (hereinafter also referred to as "ETP") sources 112. Alternatively, substrate 130 may be statically mounted in front of array 110. Each of the ETP sources 112 is supplied with at least one reactant gas injector 140 that injects a reactant gas into a plasma generated by a respective ETP source 112. It will be understood by those skilled in the art that the term "reactant gas" as used herein refers to the totality of the gaseous composition issuing from the injector 140, which in certain embodiments is a single gaseous chemical compound and in other embodiments is a mixture of gaseous chemical compounds. Reactant gas comprises compounds known in the art as precursors, which are chemicals that react during processing to form a desired product. Precursors commonly used in chemical vapor deposition processes to deposit materials such as Yttria – stabilized zirconia and other materials used in SOFC's are suitable for use in an ETP apparatus. The reactant gas then reacts with the generated plasma, and at least a portion of the products of this reaction are deposited onto substrate 130 to form coating 132. Using the ETP method to manufacture fuel cell components has a number of advantages over the use of conventional processes such as tape casting. For example, the fuel cell component layer is deposited on, and supported by, a substrate; as such the layer may be significantly thinner than layers manufactured by conventional processes, without risking damage during the manufacturing process. Furthermore, the ETP process is capable of providing higher deposition rates than those commonly available by conventional coating processes such as plasma enhanced chemical vapor deposition (PECVD), with ETP deposition rates often in the range from about 0.1 microns/minute to about 20 microns/minute. The combination of thinner layers with high deposition rates results in the potential to deposit a complete component in substantially less time than could be achieved by conventional ceramic processing methods.

Paragraph [0013]:

In Figure 2, a deposition station 200 is defined to comprise an array ~~210~~ of ETP sources 210 ~~212~~ and the corresponding array 214 of reactant gas injectors 216, wherein each of the gas injectors 216 inject a reactant gas into a plasma cloud 218 generated by the array ~~210~~ of ETP sources 210 ~~212~~ corresponding to deposition station 200. In certain embodiments of the present invention, an ETP coating apparatus 250 is used to deposit a plurality of fuel cell component layers. In some embodiments, the ETP coating apparatus 250 comprises a single deposition station 200, and the plurality of component layers is deposited by injecting one reactant gas into the plasma cloud 218 to deposit a first component layer on the substrate 220, followed by stopping the flow of the reactant gas and injecting a different reactant gas into the plasma cloud 218 to deposit a second component layer. This process is repeated until all desired component layers have been deposited on the substrate 220.